

JR

Application No. 10/663,786  
 Reply to Office Action of June 19, 2007

# IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A titanium alloy consisting of:

when the entirety is taken as 100% by mass,

at least one alloying element selected from the group consisting of molybdenum (Mo), vanadium (V), tungsten (W), niobium (Nb), tantalum (Ta), iron (Fe), chromium (Cr), nickel (Ni), cobalt (Co), and copper (Cu) and aluminum (Al) in a molybdenum equivalent "Mo<sub>eq</sub>" of from 3 to 11% by mass, the molybdenum equivalent determined by the following equation,

$$\text{Mo}_{\text{eq}} = \text{Mo}_{\text{mass}} + 0.67\text{V}_{\text{mass}} + 0.44\text{W}_{\text{mass}} + 0.28\text{Nb}_{\text{mass}} + 0.22\text{Ta}_{\text{mass}} + 2.9\text{Fe}_{\text{mass}} + 1.6\text{Cr}_{\text{mass}} [ [+1.1\text{Ni}_{\text{mass}} + 1.4\text{Co}_{\text{mass}}] ] + 0.77\text{Cu}_{\text{mass}} [ [-\text{Al}_{\text{mass}}] ],$$
 wherein Mo<sub>mass</sub>, V<sub>mass</sub>, W<sub>mass</sub>, Nb<sub>mass</sub>, Ta<sub>mass</sub>, Fe<sub>mass</sub>, Cr<sub>mass</sub>, [ [Ni<sub>mass</sub>, Co<sub>mass</sub>, Cu<sub>mass</sub> and Al<sub>mass</sub>] ] and Cu<sub>mass</sub> are expressed in percentages by mass;

at least one an interstitial solution element that is selected from the group consisting of oxygen (O), nitrogen (N) and carbon (C) in an amount of from 0.6 to 3% by mass; and

the balance of titanium (Ti);

the content of Al being controlled to 1.8% by mass or less; and

being  $\beta$  single phase at room temperature at least;

wherein said titanium alloy is produced by a solution treatment comprising:

heating a raw titanium alloy material to form a  $\beta$  single phase at a temperature above

the  $\alpha/\beta$  transformation temperature of the raw titanium alloy material; and

quenching the heated raw titanium alloy material to form a titanium alloy that is a  $\beta$  single phase at room temperature.

Claim 2 (Cancelled)